



# Shift5.1 Teardown

Teardown of the shift5.1 performed on May 13th, 2016.

Written By: Tobias Isakeit



## INTRODUCTION

The shift 5.1 is a 5 inch smart phone from the company shift located in Germany. It replaces the first version shift5 from their so called #lovephone series. Shift claims to produce its mobile devices mostly under fair conditions and is trying to use conflict free materials where possible.

---



### TOOLS:

- [Tweezers](#) (1)
  - [Phillips #000 Screwdriver](#) (1)
  - [Spudger](#) (1)
  - [iFixit Opening Tools](#) (1)
-

## Step 1 — Shift5.1 Teardown



- The shift5.1 is the second biggest smartphone in the Shift series and features these specs:
  - 5-inch HD IPS display with a resolution of 1280x720 pixels (293,72 ppi)
  - Mediatek MT6582 Quadcore SoC with 1.3 GHz
  - 2GB DDR RAM + 16 GB internal memory
  - Dual sim (regular and micro sized)
  - 2000 mAh *user-removable* Li-Polymer battery
  - 5 MP front and 8 MP rear camera
  - Android 5.1 Lollipop

## Step 2



- The shift5.1 measures in at 144 x 72 x 7 mm and weighs 140 grams.
  - ⓘ This makes it about the same size as the [Fairphone 2](#). But a lot thinner.
- For those who did not already know—it holds a small warning on its rear case:
  - ⓘ smartphones can be timekillers. there is no greater gift for you today, than the next 24hours. use them wisely. people are more important than machines.

## Step 3



- Having a user-removable battery usually equates to an easily removed back cover.
- And that's what it is: very easy. We start with a small notch at the lower end of the cover and the flexible black plastic gives way to reveal the battery.

## Step 4



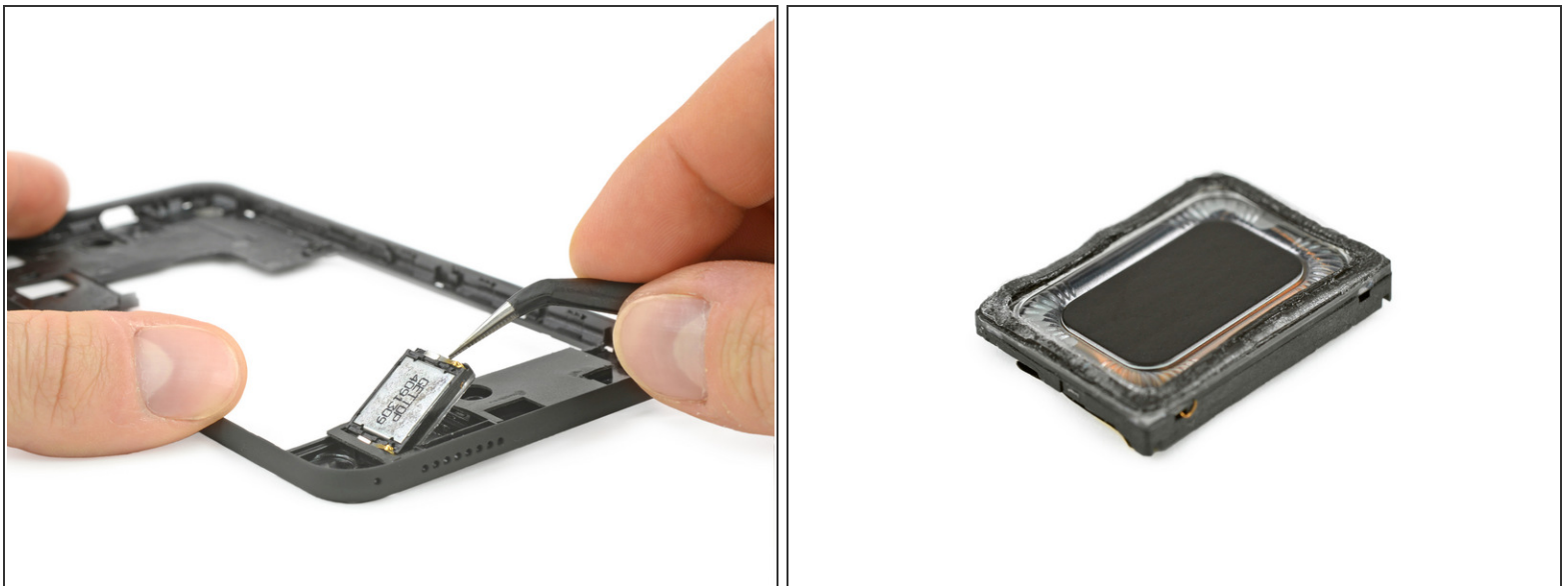
- Taking the battery out is also easy as pie.
- The 2000 mAh brings you 7.6 Wh at 3.8V, settling behind the 9.2 Wh from the Fairphone 2 battery.

## Step 5



- We bring out the Phillips #000 to loosen the seven screws and get further into the shift5.1.
- A plastic opening tool helps us prying away the plastic frame.

## Step 6



- Before we take the frame aside we take a short look at the loudspeaker which is embedded with a mild double sided adhesive tape.



## Step 7



- On the back of the display unit we see the motherboard with a multitude of components mounted on it.
- We unplug both of the display connectors and peel the volume buttons and power button unit loose from the frame.
- A single Phillips screw holds the motherboard in place.

## Step 8



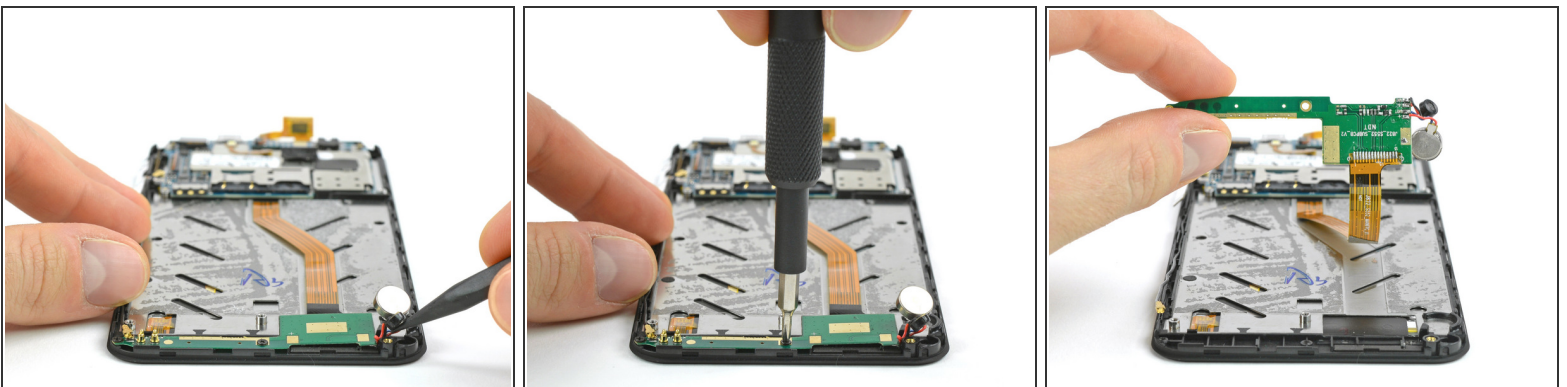
- Now we can careful lift up the motherboard and take away the 8 MP rear camera.

## Step 9



- In regular teardown fashion, we get to work peeling up the strongly-adhered plastic cover in the base of the battery housing.
- This huge black adhesive plastic foil hides the interconnect cable running from the motherboard to the daughterboard.
  - ❗ Breaking up adhesive is usually a destructive process, and this means that a simple daughterboard may become complicated quickly.
- There is also a little adhesive tape over the daughterboard.

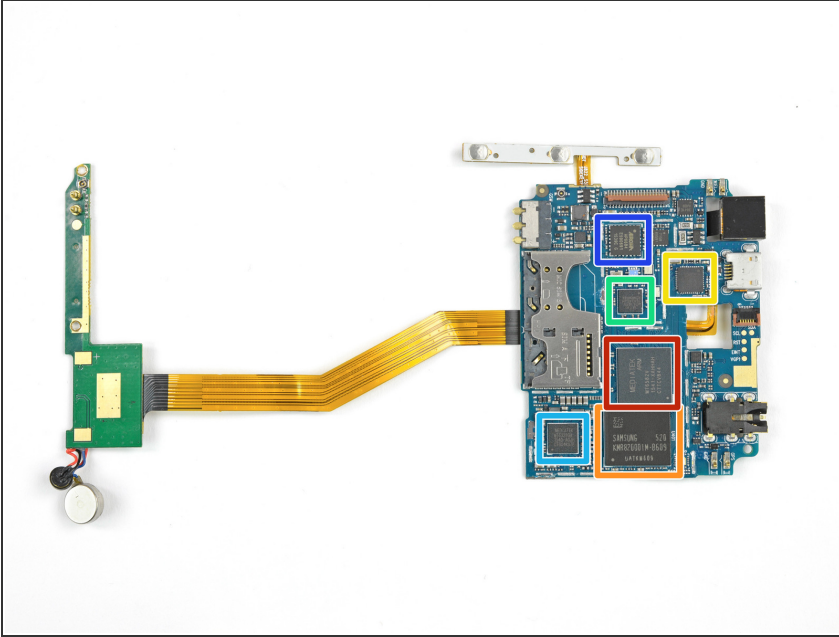
## Step 10



- After lifting the vibrator and the microphone carefully out of their recesses we free the daughterboard by loosening two more Phillips screws.

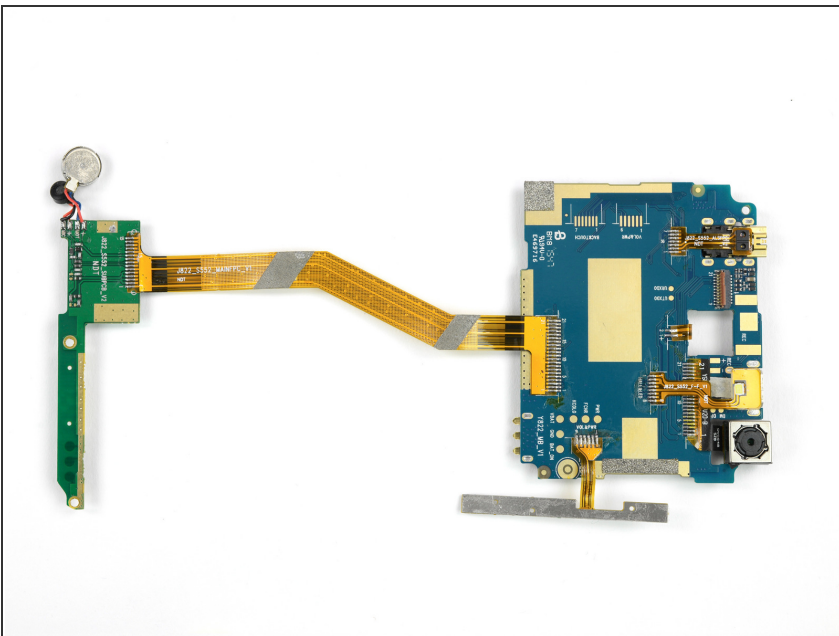


## Step 11



- And here we have the heart of the shift5.1:
  - Mediatek MT6582 SoC with an [ARM Cortex A7](#)
  - Samsung [KMR820001M-B609](#) 2GB LPDDR2 memory
  - Mediatek MT6627 Diplexer QVL for WIFI/BT/GPS
  - Mediatek [MT6166V](#) RF transceiver
  - Mediatek [MT6323GA](#) PMIC
  - AIROHA [AP6684](#) quad-band GPRS front-end module

## Step 12



- On the flip side we're met with an unfortunate surprise:
- All the remaining components are soldered to the motherboard, including the front facing camera, headphone jack and the power and volume buttons.
- ⓘ While taking a soldering iron to these connections isn't impossible, unskilled users would have trouble replacing these components without damaging their hardware.

## Step 13



- Last but not least we have the remaining display which carries the earpiece speaker.
- Taking it out leaves us with the fused display which carries a [GOODiX GT9147](#) touch screen controller on the flex cable.

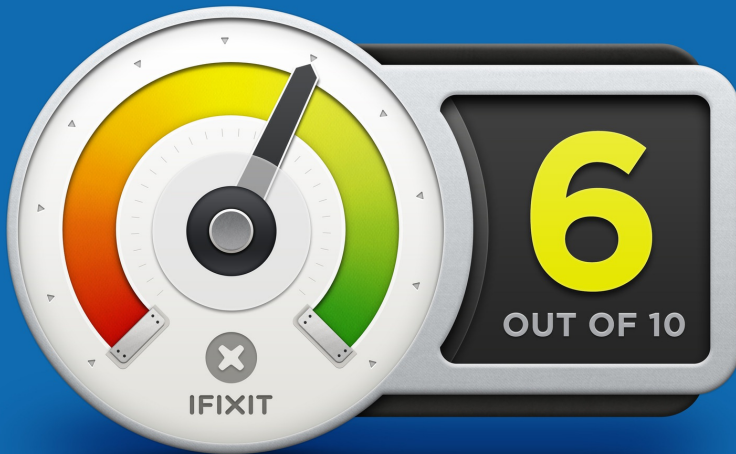
## Step 14



- And here we have the shift5.1 spread out on the teardown table showing us all it has to offer.

## Step 15 — Final Thoughts

### REPAIRABILITY SCORE:



- Shift5.1 Repairability Score: **6 out of 10** (10 being the easiest to repair):
  - Cover and battery are easy to remove and can be swapped without using tools.
  - No excessive glue and no proprietary screws are used, only Phillips #000.
  - Shift offers a [forum](#) and a [youtube channel](#) with some information and tutorials (unfortunately only in German).
  - The fused display can be changed but you need to take out everything else reminding us of the iPhone 4 and 4s.
  - Lots of components and connectors are soldered to the motherboard. They could be soldered by hand if needed but this makes repairs more difficult.

This document was last generated on 2017-06-29 12:15:04 PM.